(19) World Intellectual Property Organization

International Bureau





(43) International Publication Date 18 August 2005 (18.08.2005)

PCT

(10) International Publication Number WO 2005/076220 A1

(51) International Patent Classification7:

G06T 9/00

(21) International Application Number:

PCT/IB2005/050287

(22) International Filing Date: 25 January 2005 (25.01.2005)

(25) Filing Language: English

(26) Publication Language: English

(**30**) **Priority Data:** 04100447.4

6 February 2004 (06.02.2004) EP

(71) Applicant (for all designated States except US): KONIN-KLIJKE PHILIPS ELECTRONICS N.V. [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).

(72) Inventors; and

(75) Inventors/Applicants (for US only): BERRETTY,
Robert-Paul, M. [NL/NL]; c/o Prof. Holstlaan 6,
NL-5656 AA Eindhoven (NL). VAN OVERVELD,
Cornelius, W., A., M. [NL/NL]; c/o Prof. Holstlaan 6,
NL-5656 AA Eindhoven (NL).

(74) Agents: DE JONG, Durk, J. et al.; Philips International B.V., Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

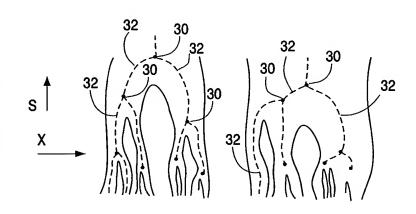
Published:

with international search report

with amended claims

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: METHOD AND APPARATUS FOR ENCODING AND DECODING AN IMAGE



(57) Abstract: A digital image coding apparatus, generates a representation of spatially filtered images that are obtainable from a common source image by application of spatial filter operations with respective filter bandwidths. dependence of image information in the filtered images on position in the filtered image and filter bandwidth is represented by information that defines a surface in a space that has at least the position in the filtered image and the filter bandwidth as coordinates. The shape and position of the surface at least partly defines said dependence. The apparatus receives an image signal that represents the source image as a function of position in the

image. The apparatus then selects coordinate values of a set of control points. Selection includes selecting filter bandwidth components of the coordinate values, dependent on the image signal. The selection optimizes a quality of approximation by an approximate version of the surface of a true version of the surface that follows from the source image.